

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2005-0024

WASTE DISCHARGE REQUIREMENTS
FOR
MUSCO FAMILY OLIVE COMPANY
AND
THE STUDLEY COMPANY
CLASS II SURFACE IMPOUNDMENTS
TRACY PLANT
SAN JOAQUIN COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Board) finds that:

1. Musco Family Olive Company (hereafter Discharger) operates an olive packing plant on property owned by the Studley Company. The facility was previously regulated by Waste Discharge Requirements (WDRs) Order No. 96-075 in conformance with Title 27 of California Code of Regulations, Division 2, Subdivision 1 (hereafter Title 27 CCR). The Discharger submitted a Report of Waste Discharge on 16 January 2004 requesting a revision of WDRs to update the expansion project at the facility.
2. The facility is at 17950 Via Nicolo in Tracy, California. This property is described by Assessor's Parcel Number(s) 209-110-14 in Section 34, T2S, R4E, MDB&M. At an elevation of 280 feet above sea level, the processing plant is on the eastern slope of the Diablo Mountain Range. The facility is south of Interstate 580 and east of Patterson Pass Road, near Tracy, as shown on Attachment A, which is incorporated herein and made a part of this order.
3. The Discharger discharges an average of 28,700 gallons per day (gpd) (10,476,500 million gallons per year) of process wastewater to two Class II surface impoundments referred to as Ponds A and B waste management units (Units). The capacity of Pond A is 38.5 acre-feet. The capacity of Pond B is 32.3 acre-feet. Ponds A and B are shown on Attachments B and C, which are incorporated herein and made a part of this Order. Attachment B is a site plan depicting the surface impoundments, groundwater monitoring wells, evaporation acreage and holding pond. Attachment C depicts Ponds A and B with associated lysimeters and sumps.
4. The facility also incorporates a one million-gallon storage pond, 84 million-gallon process wastewater storage reservoir, and land application areas located around the facility, including adjacent to the surface impoundments as shown on Attachment B. Process wastewater destined for land application is pumped to a clay-lined, 1-MG earthen holding pond and subsequently discharged to the 84-MG reservoir and the land application system

for treatment and disposal. The land application system consists of several fields, which total approximately 223 acres as shown on Attachment B. WDRs Order No. R5-2002-0148 and Cleanup and Abatement Order No. R5-2002-0149 regulates the land application system as a wastewater treatment and disposal facility.

5. A subsurface septic treatment system occupies the acreage northwest of Ponds A and B. The system automatically distributes sanitary wastewater from septic tanks via a 3-way distribution valve to three banks of leach fields as shown on Attachment B.

WASTE AND SITE CLASSIFICATION

6. Wastewater is generated from the storage area, the processing areas, the canning areas, and from certain incoming water treatment and boiler feed water treatment processes. Source water for processing comes from the California Aqueduct obtained from the Department of Water Resources State Water Project (SWP). The SWP monitors the water quality at the Harvey Banks Delta Pumping Plant (HBDPP) for parameters, including but not limited to, temperature, turbidity, pH, electroconductivity (EC) and flow. Source water is treated prior to use in the plant.
7. The three streams directed to the surface impoundments are the flotation brine (~25,000 gpd), the softener ion-exchange regeneration stream (~1,100 gpd) and the boiler blow down (~2,100 gpd). Spent lye that can no longer be recycled and excess brine from spillage from conveyor belts is directed via floor drains and sumps to the surface impoundments.
8. Stormwater from the process areas is collected in secondary containment, routed via drains to sumps and pumped to the wastewater holding pond. Stormwater from a small chemical storage area can be directed to the surface impoundments if warranted based on testing of characteristics. Stormwater monitoring is performed in accordance with the Musco Stormwater Pollution Prevention Plan (SWPPP) and the National Pollution Discharge Elimination System (NPDES) General Permit No. CAS000001.
9. Table 1 provides a summary of the average analytical results for samples collected from the surface impoundments. Samples from the surface impoundments were analyzed for EC, pH, total dissolved solids (TDS), chloride, sulfate, nitrate, chemical oxygen demand (COD), total hardness, calcium, magnesium, potassium, and total alkalinity. Background concentration limits (CLs) as Water Quality Protection Standards (WQPSs) for constituents of concern (COCs) have not been established at this time. CLs based on intra- or interwell analysis will be established once a sufficient number of groundwater quality results are available for statistical calculation. In the absence of WQPSs based on background or baseline concentrations, Table 1 also provides reference water quality goals.

Table 1.

Constituents/ Parameters	Average (1996-2003)		Water Quality Goals¹	
	Pond A	Pond B	Groundwater	Surface Water
EC (µmhos/cm)	61,187	41,540	700 ²	700 ²
pH	8.77	8.90	6.5-8.4 ²	6.5-8.4 ²
TDS (mg/l)	79,470	41,021	450 ²	450 ²
Chloride (mg/l)	27,577	13,601	106 ²	106 ²
Sulfate (mg/l)	915	310	250 ³	250 ³
Nitrate (mg/l)	1	5	10 ⁴	10 ⁴
COD (mg/l)	30,391	18,140	-	-
Total Hardness (mg/l)	320	212	-	-
Calcium (mg/l)	155	100	-	-
Magnesium (mg/l)	96	53	-	-
Potassium (mg/l)	3,203	1,243	-	-
Total Alkalinity as CaCO ₃ (mg/l)	22,660	10,490	-	-

¹A Compilation of Water Quality Goals (RWQCB-CV, 2004, <http://www.swrcb.ca.gov/rwqcb5/>)

²Agricultural Water Quality Goals (Food & Ag. Org. of United Nations)

³Drinking Water Standards - Secondary MCL (taste & odor or welfare-based)

⁴California Public Health Goal (Cal/EPA, OEHHA)

10. 'Designated waste' is defined in California Water Code, §13173, as a nonhazardous waste which consists of, or contains pollutants which, under ambient environmental conditions at the waste management unit, could be released at concentrations in excess of applicable water quality goals, or which could cause degradation of waters of the state.
11. The discharge poses a significant threat to water quality. Therefore, the discharge is a 'designated waste' and as such must be discharged to Class II Surface Impoundments as required by Title 27 CCR.

SITE DESCRIPTION

12. The measured hydraulic conductivity of the native soils underlying the Units ranges between 1.5×10^{-8} and 6×10^{-8} cm/sec corresponding to 2.13×10^{-5} in/hr and 8.5×10^{-6} in/hr. The soils at the facility are predominately clay, clayey silt and silty clay. Two-thirds of the western portion of the facility is located on the materials from the Pliocene period, which consist of sedimentary deposits of the Tulare and Laguna formations. The other one-third (eastern) is situated on the Pleistocene nonmarine sediments. Surface soils are of the Ambrose Clay Formation (Calla-Carbona Complex, Carbona Clay Loam) consisting of dark brown or dark grayish-brown strongly developed secondary material from sandstones, shales, and other sedimentary rocks and tend to have low permeability rates.
13. The closest Holocene fault, known as the Greenville fault, is approximately 4.5 miles west of the Units. Recorded magnitudes of seismic events along this fault range between 5.3 and 5.9 on the Richter scale. A magnitude 6.5 earthquake originating 4.5 miles from the surface impoundments would produce an estimated 0.49 g maximum peak bedrock acceleration below the ponds. Two minor faults within one mile are the Midway fault (potentially active) and Black Butte fault (inactive).
14. Land uses within 1,000 feet of the facility are residential and agricultural.
15. The average annual total precipitation for this area of San Joaquin County (Tracy Pumping Plant, Station Number 049001) is 12.2 inches. The 100-year annual total precipitation for this area is 29.7 inches. The peak monthly 100-year precipitation of 6.4 inches occurs in January.
16. The 100-year, 24-hour precipitation event is estimated to be 2.5 inches, based on the California Department of Transportation Intensity-Duration-Frequency Rainfall Curve Program for the Tracy 2 SSE Station No. 116. The 24-hour, 1,000 year storm event is 3 inches.
17. The waste management facility is not within a 100-year flood plain based on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map, Community-Panel Number 0602990700A.

SURFACE AND GROUND WATER CONDITIONS

18. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basin, Fourth Edition* (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.
19. The designated beneficial uses of the groundwater, as specified in the Basin Plan, are domestic and municipal, agricultural, and industrial supply.

20. Surface drainage is toward a dry creek bed, which flows eastward toward the valley floor in the North Diablo Range Hydrologic Area (543.00) of the San Joaquin Hydrologic Basin. This creek bed does not empty into another waterway, but rather disappears on the valley floor east of the site.
21. According to Kennedy/Jenks Consultants (as cited in the Report of Waste Discharge, Class II Surface Impoundments), hydrogeology (i.e., multiple water bearing zones) is characterized by complex alluvial fan, which imparts variable chemical constituents and occurrences of groundwater zones. It is of an alluvial fan nature and therefore is spatially variable, such that the fans are discontinuous laterally and with depth. The water quality within the zones is influenced by the material-properties of the formation (matrix) in addition to the effects of mixing of groundwater as these permeable zones coalesce in the distal portion of the fan. This also means that the water bearing zones within the single groundwater system (aquifer) cannot be readily correlated. The shallow zone groundwater is seasonal and perched. There are also intermediate and deep zones, which are underlain by the competent Corcoran clay-confining zone.
22. Water quality within the various groundwater zones is influenced by the material properties of the formation in addition to the effects of mixing of groundwater in these permeable zones. Statistically derived concentration limits appropriate for potential leak detection have not been developed at this time due to the limited data set. Once a sufficient amount of data is available, the Discharger will develop Water Quality Protection Standards (WQPS) for the constituents of concern (COC) for groundwater and surface water.
23. Attachment B depicts the groundwater monitoring system for the entire facility. A network of 17 monitoring wells monitors groundwater at the facility. Monitoring wells MW-11, MW-12, and W-2 currently monitor groundwater around the surface impoundments in the up-, down-, and cross-gradient locations, respectively. MW-11 and W-2 encounter intermediate-depth groundwater from 35-40 feet below ground surface (bgs). Monitoring well MW-12 encounters deeper groundwater from 90-130 feet bgs. The remaining 14 wells, MW-1 through MW-10 and MW-13 through MW-16 monitor the groundwater beneath the land application areas and are not directly associated with the surface impoundments. The Discharger proposes to install additional wells in order to ensure that the water bearing horizons around the surface impoundments are adequately monitored. The groundwater is unconfined. The depth to groundwater fluctuates seasonally.
24. Shallow groundwater flow direction around the Ponds is to the northeast. The deeper groundwater flow direction is to the northwest based on December 2003 data. The average groundwater gradient near MW-5, MW-10 and W-2 is approximately 0.007 feet per foot (4th Quarter 2003). The deeper zone near MW-4, MW-7, MW-8 and MW-12 had a gradient of approximately 0.029 feet per foot (4th Quarter 2003).

25. There are six wells within 5,000 feet of the site, screened between 80 and 600 feet below ground surface. The uses of water from these wells are domestic, agricultural and industrial supply. There is one residence within 1000 feet of the facility, which has a domestic well known as Regional Well So. Hansen. The well screen interval is unknown. The groundwater elevation is considered to be in the shallow water-bearing zone. Water quality is monitored by the Discharger.
26. The Discharger has installed 37 lysimeters under Ponds A and B at five and 10-foot depths to monitor the vadose zone. Lysimeter numbers 6, 13, 30, 36, 37, and 38 are no longer functioning. One additional lysimeter was installed approximately 250 feet southwest of Pond A to function as a background vadose zone monitoring point. Because the land above the background lysimeter is now irrigated with process wastewater, the Discharger has agreed to install a new background lysimeter at an approved location. Attachment C shows the lysimeter designations. Series 1900 lysimeters are twelve inches long with a porous tip, PVC body, and polyethylene tubing extending to the surface to convey collected fluid.

GROUNDWATER, UNSATURATED ZONE, AND SURFACE WATER MONITORING

27. The Discharger's detection monitoring program for groundwater at the Units does satisfy the requirements contained in Title 27 CCR. However, several wells have gone dry over time. If specific wells that monitor the Units remain dry over four consecutive seasonal sampling events, the Discharger shall be required to propose additional wells to comply with groundwater detection monitoring requirements.
28. The Discharger's detection monitoring program for the unsaturated zone at the Units does satisfy the requirements contained in Title 27 CCR.
29. The Discharger's detection monitoring program for surface water at the Units does satisfy the requirements contained in Title 27 CCR.

DESIGN OF WASTE MANAGEMENT UNITS

30. Kenneth Kjeldsen, a California Registered Civil Engineer has certified that, for the two surface impoundments, the surface impoundment design (including leachate collection and removal system), vadose zone monitoring design and groundwater monitoring system design comply with Chapter 15 (now Title 27 CCR) for a Class II surface impoundment.
31. Ponds A and B were constructed and tested in 1986 and 1991, respectively. The design of these two surface impoundments, consist of the following liner system as shown on Attachment D:
 - The foundations for the embankments of the ponds consist of a tan silty-clay excavated from the site and were tied into the native soil by excavating and

backfilling a keyway. The embankments were then constructed in four inch lifts with the dark clay placed on the inside of the embankment and the tan silty-clay placed on the outside. The dark clay was placed along the cut slopes all the way to the bottom of the impoundment excavation to form a clay liner with a minimum thickness of 24 inches on the side slopes.

- A three-foot layer of the dark clay was placed in the bottom of the impoundment excavation on the compacted subgrade. The clay was graded into ridges and valleys, sloped at 2% downwards toward the valleys. The thickness of the clay liner on the bottom of the ponds is a minimum of 24 inches at the valley positions and 36 inches at the ridge positions.
 - Four-inch diameter perforated polyvinyl chloride (PVC) pipes were installed on top of the clay liner within the valleys and were surrounded with filter gravel and a geotextile filter fabric wrap. The pipes drain to a six inch perforated collector pipe that transports liquid to one of four leachate collection and recovery system (LCRS) sumps. A free-draining granular media was placed on top of the clay liner and LCRS piping to a depth of six inches at the ridge positions and 12 inches at the valley positions. A geomembrane drainage mat with a geo-fabric backing was placed on the clay liner of the side slopes to direct potential leakage from the side slopes to the LCRS.
 - Both surface impoundments were lined with a Hypalon reinforced chlorosulfonated polyethylene synthetic liner. The synthetic liner forms an impenetrable layer over the LCRS and was secured by burying the ends in an anchor trench at the top of the embankments. According to Kjeldsen, Sinnock and Associates, "Extensive testing conducted on Hypalon liners for use in salt gradient solar ponds indicate that Hypalon is very compatible with brine solutions and will perform very well in this application."
32. The four LCRS sumps are monitored quarterly for the presence of liquid. Approximately 70 gallons/minute of leachate can flow through the system without building a hydraulic head on the clay liner. The sumps are inspected quarterly for cracks in the concrete or visible wear, as well as for any liquid in the LCRS. There are float-controlled pumps in the bottom of the sumps, which will automatically turn on if any leachate enters the sump, and pump the leachate back into the evaporation pond. The pumps are pulled out of the sump quarterly and test by inverting the float control and verifying that the pump turns on automatically.
33. The Discharger has sampled the pond sediment for analysis and proposes to test the functionality of the LCRS system for each pond.
34. Section 13267(b) of California Water Code provides that: "In conducting an investigation specified in subdivision (a), the Regional Board may require that any person who has

discharged, discharges, or is suspected of discharging, or who proposed to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who had discharged, discharges, or is suspected of discharging, or who proposed to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The monitoring and reporting program required by this Order and the attached "Monitoring and Reporting Program No. R5-2005-0024" are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.

35. Section 13268 of the California Water Code provides that: (a)(1) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267, or failing or refusing to furnish a statement of compliance as required by subdivision (b) of Section 13399.2, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b), and

(b) (1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with Section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars (\$1,000) for each day in which the violation occurs

CEQA AND OTHER CONSIDERATIONS

36. The action to revise waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resource Code §21000, et seq., and the CEQA guidelines, in accordance with Title 14, CCR, §15301.
37. This order implements:
- a. *The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition*, and subsequent revisions; and
 - b. The prescriptive standards and performance goals of Title 27, California Code of Regulations, effective 18 July 1997, and subsequent revisions.

PROCEDURAL REQUIREMENTS

38. All local agencies with jurisdiction to regulate land use, solid waste disposal, air pollution, and to protect public health have approved the use of this site for the discharges of waste to land stated herein.

39. The Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
40. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.
41. Any person affected by this action of the Regional Board may petition the State Water Resources Control Board to review the action in accordance with Sections 2050 through 2068, Title 23, California Code of Regulations. The petition must be received by the State Water Resources Control Board, Office of Chief Counsel, P.O. Box 100, Sacramento, California 95812, within 30 days of the date of issuance of this Order. Copies of the laws and regulations applicable to the filing of a petition are available on the Internet at http://www.swrcb.ca.gov/water_laws/index.html and will be provided on request

IT IS HEREBY ORDERED pursuant to Sections 13263 and 13267 of the California Water Code that Order No. 96-075 is rescinded, and that the Musco Family Olive Company and The Studley Company, its agents, successors, and assigns, in order to meet the provisions of Division 7 of the California Water Code and the regulations adopted there under, shall comply with the following:

A. PROHIBITIONS

1. The discharge of 'hazardous waste' at this facility is prohibited. For the purposes of this Order, the terms 'hazardous waste' and 'designated waste' are as defined in Division 2 of Title 27 of the CCR.
2. The discharge of solid waste or liquid waste to surface waters, surface water drainage courses, or groundwater is prohibited.
3. The discharge of wastes outside of a waste management unit or portions of a waste management unit specifically designed for their containment is prohibited.
4. The discharge of wastes that have the potential to reduce or impair the integrity of containment structures or which, if commingled with other wastes in the unit, could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products which, in turn:
 - a. require a higher level of containment than provided by the unit,
 - b. are 'restricted hazardous wastes', or

- c. impair the integrity of containment structures,

is prohibited.

B. DISCHARGE SPECIFICATIONS

General Specifications

1. Wastes shall only be discharged into, and shall be confined to, the waste management units (WMUs) specifically designed for their containment.
2. Prior to the discharge of waste to a WMU, all wells within 500 feet of the unit shall have sanitary seals, which meet the requirements of the San Joaquin County Health Department or shall be properly abandoned. A record of the sealing and/or abandonment of such wells shall be sent to the Board and to the State Department of Water Resources.

Protection from Storm Events

3. Waste management units shall be designed, constructed and operated to prevent inundation or washout due to flooding events with a 100-year return period.
4. Surface impoundments and related containment structures shall be constructed and maintained to prevent, to the greatest extent possible, inundation, erosion, slope failure, washout, and overtopping under 1,000-year, 24-hour precipitation conditions, and shall be designed to contain the 100-year wet season precipitation without using the required 2 feet of freeboard.
5. Precipitation and drainage control systems shall be designed, constructed and maintained to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 100-year, 24-hour precipitation conditions.
6. Annually, prior to the anticipated rainy season, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the site.

Class II Surface Impoundment

7. In the event that a new surface impoundment(s) is proposed, the liner system shall meet the minimum requirements set forth in Title 27 CCR Section 20310 et seq. Title 27 CCR Section 20080 describes the performance standards for applying for an engineered alternative to the prescriptive standards.

8. Containment structures shall be designed by, and construction shall be supervised and certified by, a registered civil engineer or a certified engineering geologist. Units shall receive a final inspection and approval of the construction by RWQCB staff before use of the Unit commences.
9. The unsaturated zone monitoring system shall be capable of measuring both saturated and unsaturated flows that may occur because of a release from the waste management unit.
10. Surface impoundments and related containment structures shall be constructed and maintained to prevent, to the greatest extent possible, inundation, erosion, slope failure, washout, and overtopping under 1,000-year, 24-hour precipitation conditions, and shall be designed to contain the 100-year wet season precipitation without using the required 2 feet of freeboard.
11. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the surface impoundments.
12. Materials used to construct LCRSs shall have appropriate physical and chemical properties to ensure the required transmission of leachate over the life of the surface impoundments and the post-closure maintenance period.
13. LCRSs shall be designed, constructed, and maintained to collect twice the anticipated daily volume of leachate generated by each surface impoundment and to prevent the buildup of hydraulic head on the underlying liner at any time. The depth of the fluid in any LCRS sump shall be kept at the minimum needed for safe pump operation.
14. Any direct-line discharge to a surface impoundment shall have fail-safe equipment or operating procedures to prevent overfilling.
15. The surface impoundment(s) shall be designed, constructed and maintained to prevent scouring and/or erosion of the liners and other containment features at points of discharge to the impoundments and by wave action at the water line.
16. Leachate removed from a surface impoundment's primary LCRS shall be discharged to the impoundment from which it originated.
17. Leachate generation by a surface impoundment to the primary LCRS shall not exceed design requirements. If leachate generation exceeds this value, then the Discharger shall immediately cease the discharge of waste, excluding leachate, to the impoundment and shall notify the Board in writing within seven days. Notification

shall include a timetable for remedial action to repair the upper liner to the impoundment or other action necessary to reduce leachate production.

18. If leachate is detected in the vadose zone monitoring system (VZMS) of a surface impoundments indicating a leak in the containment structures the Discharger shall:
 - a. Immediately cease discharge of waste, excluding leachate to the surface impoundments until the leaks can be found and repaired;
 - b. report to the RWQCB that the containment structures have failed within 72 hours;
 - c. submit written notification of the release to the RWQCB within seven days, the notification should include a time schedule to repair the containment structures; and
 - d. discharge of wastes to the surface impoundments will not resume until the RWQCB has determined that repairs to the liners are complete and there is no further threat to water quality.
19. Solids that accumulate in the surface impoundments shall be periodically removed to maintain minimum freeboard requirements and to maintain sufficient capacity for surface impoundment leachate and for the discharge of wastes. Prior to removal of these solids, sufficient samples shall be taken for their characterization and classification pursuant to Article 2, Subchapter 2, Chapter 3, Division 2 of Title 27 CCR. The rationale for the sampling protocol used, the results of this sampling, and a rationale for classification of the solids shall be submitted to Board staff for review.
20. Leachate generation by a waste containment unit LCRS shall not exceed 85% of the design capacity of (a) the LCRS, or (b) the sump pump. If leachate generation exceeds this value and/or if the depth of the fluid in an LCRS exceeds the minimum needed for safe pump operation, then the Discharger shall immediately cease the discharge of waste, excluding leachate, to the waste management unit and shall notify the Board in writing within **seven days**. Notification shall include a timetable for a remedial action to repair the containment structures or other action necessary to reduce leachate production.

Class II Surface Impoundment Closure

21. The closure of each surface impoundments shall be under the direct supervision of a California registered civil engineer or certified engineering geologist.

22. At closure of surface impoundments, all residual wastes, including liquids, sludges, precipitates, settled solids, and liner materials and adjacent natural geologic materials contaminated by wastes, shall be completely removed and discharged to a waste management unit approved by Board staff. If after reasonable attempts, the Discharger demonstrates the removal of all remaining contamination is infeasible, the surface impoundments shall be closed as a landfill.

C. RECEIVING WATER LIMITATIONS

Water Quality Protection Standards

The concentrations of Constituents of Concern in waters passing through the Points of Compliance shall not exceed the Concentration Limits established pursuant to Monitoring and Reporting Program No. R5-2005-0024, which is attached to and made part of this Order.

D. FINANCIAL ASSURANCE

1. The Discharger shall demonstrate financial responsibility for initiating and completing corrective action of all known or reasonably foreseeable releases, and shall submit a report for financial assurances by **April 30 each year** to the Executive Officer review and approval. The assurances of financial responsibility shall name the Regional Board as beneficiary and shall provide that funds for corrective action shall be available to the Regional Board upon the issuance of any order under California Water Code, Division 7, Chapter 5. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation.
2. The Discharger shall demonstrate financial responsibility for closure and post-closure maintenance, and shall submit a report of financial assurances by **April 30 each year** for Executive Officer review and approval. The assurances of financial responsibility shall provide that funds for closure and post-closure maintenance shall be available to the Regional Board upon the issuance of any order under California Water Code, Division 7, Chapter 5. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation.
3. The Discharger shall, by **30 April of each year**, submit for approval by the Executive Officer, plans with detailed cost estimates and a demonstration of assurances of financial responsibility for initiating and completing corrective action for all known or reasonably foreseeable releases from the waste management unit. The Discharger shall provide the assurances of financial responsibility to the Regional Board as required by Title 27 CCR, Division 2, Subdivision 1, Chapter 6. The assurances of financial responsibility shall provide that funds for corrective action shall be available to the Regional Board upon the issuance of any order under California Water Code, Division 7, Chapter 5. The Discharger shall adjust the cost annually to

account for inflation and any changes in facility design, construction, or operation. The financial assurance fund for corrective action shall be established **prior to discharging waste to the surface impoundments.**

4. The Discharger shall, by **30 April** of each year, submit for approval by the Executive Officer, plans with detailed cost estimates and a demonstration of assurances of financial responsibility to ensure closure and post-closure maintenance of each waste management unit in accordance with its approved closure and post-closure maintenance plans. The Discharger shall provide the assurances of financial responsibility to the Regional Board as required by Title 27 CCR, Division 2, Subdivision 1, Chapter 6. The assurances of financial responsibility shall provide that funds for corrective action shall be available to the Regional Board upon the issuance of any order under California Water Code, Division 7, Chapter 5. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation. The financial assurance fund for closure and post-closure maintenance shall be established prior to discharging waste to the surface impoundments.

E. PROVISIONS

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements, dated September 2003, which are hereby incorporated into this Order. The Standard Provisions and Reporting Requirements contain important provisions and requirements with which the Discharger must comply. A violation of any of the Standard Provisions and Reporting Requirements is a violation of these waste discharge requirements.
2. The Discharger shall comply with Monitoring and Reporting Program No. R5-2005-0024, which is attached to and made part of this Order. This compliance includes, but is not limited to, maintenance of waste containment facilities and precipitation and drainage controls and monitoring groundwater, the unsaturated zone, and surface waters throughout the active life of the waste management units and the post-closure maintenance period. A violation of Monitoring and Reporting Program No. R5-2005-0024 is a violation of these waste discharge requirements.
3. The Discharger shall complete the following tasks and obtain approval by Board staff:
 - a. install a background groundwater monitoring system;

- b. establish background groundwater quality through at least one year of monitoring (a minimum of 8 samples is required to develop statistical values for inorganic COCs);
 - c. submit a report proposing a Water Quality Protection Standard (Water Standard);
 - d. submit a plan for approval by the RWQCB for a groundwater quality monitoring system; and
 - e. install an approved groundwater quality monitoring system.
4. Prior to discharging waste to the Class II Surface Impoundment the discharger shall establish Financial Assurance funds for corrective action, unit closure and post-closure maintenance.
5. The Discharger shall maintain legible records of the volume and type of waste discharged to the surface impoundments and the manner and location of the discharge. Such records shall be maintained at the facility until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the Board and of the State Water Resources Control Board. Copies of these records shall be sent to the Board.
6. The Discharger shall provide proof to the Board within sixty days after completing final closure that the deed to the surface impoundment facility property, or some other instrument that is normally examined during title search, has been modified to include, in perpetuity, a notation to any potential purchaser of the property stating that:
 - a. the parcel has been used for disposal of liquid wastes;
 - b. land use options for the parcel are restricted in accordance with the post-closure land uses set forth in the post-closure plan and in WDRs for the surface impoundment; and
 - c. in the event that the Discharger defaults on carrying out either the post-closure maintenance plan or any corrective action needed to address a release, then the responsibility for carrying out such work falls to the property owner.
7. The Board will review this Order periodically and may revise requirements when necessary.

F. REPORTING REQUIREMENTS

1. The Discharger shall comply with the reporting requirements specified in this Order, in Monitoring and Reporting Program Order No. R5-2005-0024 and in the Standard Provisions and Reporting Requirements dated September 2003.
2. Pursuant to Section 13267(b) of California Water Code and these WDRs the Discharger shall complete the tasks outlined in these WDRs and the attached Monitoring and Reporting Program No. R5-2005-0024 in accordance with the following time schedule. The required technical reports are necessary in the evaluation and protection of water quality:

<u>Task</u>	<u>Compliance Date</u>
a. Submit a work plan with a schedule describing details for installation of monitoring wells surrounding Ponds A and B.	1 March 2005
b. Submit a work plan with a schedule describing details for a LCRS and lysimeter test of Ponds A and B.	1 March 2005
c. Submit Water Quality Protection Standards based on background (minimum of 8 discrete sampling events)	1 March 2005
d. Submit a closure and post-closure maintenance plan that complies with Title 27 CCR	180 days prior to closure

3. In the event of any change in ownership of this waste management facility, the Discharger shall notify the succeeding owner or operator in writing of the existence of this Order. A copy of that notification shall be sent to the Board.

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2005-0024
CLASS II SURFACE IMPOUNDMENTS
MUSCO FAMILY OLIVE COMPANY
AND THE STUDLEY COMPANY
SAN JOAQUIN COUNTY

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I, Thomas R. Pinkos, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 27 January 2005.

THOMAS R. PINKOS, Executive Officer

Attachments

KAS

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2005-0024

FOR

MUSCO FAMILY OLIVE COMPANY AND
THE STUDLEY COMPANY
CLASS II SURFACE IMPOUNDMENTS
SAN JOAQUIN COUNTY

Waste Discharge Requirements Order No. R5-2005-0024 orders compliance with this Monitoring and Reporting Program, and with the companion Standard Provisions and Reporting Requirements. Failure to comply with this Monitoring and Reporting Program, or with the Standard Provisions and Reporting Requirements, dated September 2003, constitutes noncompliance with the WDRs and with the Water Code, which can result in the imposition of civil monetary liability.

A. REPORTING

The Discharger shall report monitoring data and information as required in this Monitoring and Reporting Program and as required in the Standard Provisions and Reporting Requirements. Reports, which do not comply with the required format, will be **REJECTED** and the Discharger shall be deemed to be in noncompliance with the WDRs. In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly the compliance with waste discharge requirements or the lack thereof. Historical and current monitoring data shall be graphed at least once annually. Graphs for the same constituent shall be plotted at the same scale to facilitate visual comparison of monitoring data. A short discussion of the monitoring results, including notations of any water quality violations shall precede the tabular summaries. Data shall also be submitted in a digital format acceptable to the Executive Officer.

Method detection limits and practical quantitation limits shall be reported. Field and laboratory tests shall be reported in the semiannual monitoring reports. The results of any monitoring done more frequently than required at the locations specified herein shall be reported to the Board.

B. REQUIRED MONITORING REPORTS AND SUBMITTAL DATES

1. Semiannual and Annual Groundwater, Vadose Zone and Leachate Monitoring Reports

All semiannual and annual monitoring reports shall include all water quality data and observation collected during the reporting period and submitted per the **Reporting Due Dates** in Section B.6. of this Monitoring and Reporting Program. At a minimum the sampling and data collection in Tables 1 through 5 of this Monitoring and Reporting Program, Standard Provisions and Reporting Requirements, and Waste Discharge Requirements shall be reported.

2. Annual Monitoring Summary Report

The Discharger shall submit an Annual Monitoring Summary Report to the Board covering the previous monitoring year. The annual report shall contain the information specified in Standard Provisions and Reporting Requirements, Section 4 of the *“Reports to be Filed with the Board.”*

3. Facility Monitoring Report

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility. The inspection shall assess damage to the drainage control system, groundwater monitoring equipment (including wells, etc.), and shall include the Standard Observations contained in Section F.4.f. of Standard Provisions and Reporting Requirements.

4. Response to a Release

If the Discharger determines that there is significant statistical evidence of a release (i.e. the initial statistical comparison or non-statistical comparison indicates, for any Constituent of Concern or Monitoring Parameter, that a release is tentatively identified), the Discharger shall immediately notify the Board verbally as to the Monitoring Point(s) and constituent(s) or parameter(s) involved, shall provide written notification by certified mail within seven days of such determination and implement Response to Release section of the Standard Provisions and Reporting Requirements.

5. Water Quality Protection Standard Report

Any proposed changes in a statistical method or concentration limits for a constituent of concern or monitoring parameter a Water Quality Protection Standard Report shall be submitted and include the information required in Section C.1. of this Monitoring Reporting Program. Any changes to Water Quality Protection Standards shall be approved by the Executive Officer in a Revised Monitoring and Reporting Program.

6. Submittal Dates

Semiannual/Annual Groundwater, Unsaturated Zone, Surface Water and Leachate Monitoring Reports

Reporting Type	Sampling Frequency and Data Reported	Reporting Period	Report Date Due
Semiannual	Semiannual	1 January – 30 June	31 July
	Annual	1 July – 31 December	31 January

Annual Monitoring Summary Report

31 January

Facility Monitoring Report

15 November

Response to a Release

as necessary

Water Quality Protection Standard Report

90 days after 8 sampling events

C. WATER QUALITY PROTECTION STANDARD AND COMPLIANCE PERIOD

1. Water Quality Protection Standard Report

For each waste management unit (Unit), the Water Quality Protection Standard shall consist of all constituents of concern, the concentration limit for each constituent of concern, the point of compliance, and all water quality monitoring points.

The Water Quality Protection Standard for naturally occurring waste constituents consists of the constituents of concern, the concentration limits, and the point of compliance and all monitoring points. The Executive Officer shall review and approve the Water Quality Protection Standard, or any modification thereto, for each monitored medium.

The report shall:

- a. Identify **all distinct bodies of surface and groundwater** that could be affected in the event of a release from a Unit or portion of a Unit. This list shall include at least the uppermost aquifer and any permanent or ephemeral zones of perched groundwater underlying the facility.
- b. Include a map showing the monitoring points and background monitoring points for the surface water monitoring program, groundwater monitoring program, and the unsaturated zone monitoring program. The map shall include the point of compliance in accordance with §20405 of Title 27.
- c. Evaluate the perennial direction(s) of groundwater movement within the uppermost groundwater zone(s).

If subsequent sampling of the background monitoring point(s) indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to waste management activities at the site, the Discharger may request modification of the Water Quality Protection Standard.

2. Constituents of Concern

The constituents of concern include all the waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the

Unit. The constituents of concern for all Units at the facility are those listed in **Tables 2 through 5** for the specified monitored medium. The Discharger shall monitor all constituents of concern every five years, or more frequently as required in accordance with a Corrective Action Program.

a. Monitoring Parameters

Monitoring parameters are constituents of concern that are the waste constituents, reaction products, hazardous constituents, and physical parameters that provide a reliable indication of a release from a Unit. The monitoring parameters for all Units are those listed in **Tables 1 through 5** for the specified monitored medium.

3. Concentration Limits

For a naturally occurring constituent of concern, the concentration limit for each constituent of concern shall be determined as follows:

- a. By calculation in accordance with a statistical method pursuant to §20415 of Title 27; or
- b. By an alternate statistical method acceptable to the Executive Officer in accordance with §20415 of Title 27.

4. Point of Compliance

The point of compliance for the water standard at each Unit is a vertical surface located at the hydraulically downgradient limit of the Unit that extends through the uppermost aquifer underlying the Unit.

D. MONITORING

The Discharger shall comply with the monitoring program provisions of Title 27 for groundwater, surface water, and the unsaturated zone, in accordance with Monitoring Specifications in Standard Provisions and Reporting Requirements. A minimum of 8 samples should be used to develop background concentrations for COCs. All monitoring shall be conducted in accordance with a Sample Collection and Analysis Plan, which include quality assurance/quality control standards, that are acceptable to the Executive Officer.

All point of compliance monitoring wells established for the detection monitoring program shall constitute the monitoring points for the groundwater Water Quality Protection Standard. All detection monitoring program groundwater monitoring wells, unsaturated zone monitoring devices, leachate, and surface water monitoring points shall be sampled and analyzed for monitoring parameters and constituents of concern as indicated and listed in **Tables 1 through 5**.

Method detection limits and practical quantitation limits shall be reported.

MONITORING AND REPORTING PROGRAM ORDER NO. R5-2005-0024
 CLASS II SURFACE IMPOUNDMENTS
 MUSCO FAMILY OLIVE COMPANY.
 AND THE STUDLEY COMPANY
 SAN JOAQUIN COUNTY

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The Discharger may, with the approval of the Executive Officer, use alternative analytical test methods, including new USEPA approved methods, provided the methods have method detection limits equal to or lower than the analytical methods specified in this Monitoring and Reporting Program.

1. Waste Discharge Monitoring

The Discharger shall monitor all wastes discharged to the Class II surface impoundments on a monthly basis and report the results in the semiannual and annual Detection Monitoring Reports:

Table 1 - Waste Discharge Monitoring		
<u>Parameters</u>	<u>Units</u>	<u>Frequency</u>
Quantity Discharged	gallons	Monthly
Remaining Capacity	acre-feet	Monthly
Minimum Freeboard	Ft. & Tenths	Monthly

2. Surface Impoundment

Surface impoundment samples shall be collected in a convenient location at least 50 feet from the influent structure. Liquids in the surface impoundments shall be sampled for the following:

Table 2 - Surface Impoundment Monitoring		
<u>Parameters</u>	<u>Units</u>	<u>Frequency</u>
<u>Field Parameter</u>		
Flow Rate	gallons per month	Monthly
Freeboard	Feet & Tenths	Monthly
Specific Conductance	µmhos/cm	Semiannually
pH	pH number	Semiannually
<u>Monitoring Parameters</u>		
Total Dissolved Solids	mg/L	Semiannually
Chemical Oxygen Demand	mg/L	Semiannually
Chloride	mg/L	Semiannually
Sodium	mg/L	Semiannually
Nitrate – Nitrogen	mg/L	Semiannually
Total Hardness	mg/L	Semiannually
Calcium	mg/L	Annually
Magnesium	mg/L	Annually
Potassium	mg/L	Annually
Alkalinity	mg/L	Annually
Sulfate	mg/L	Annually

3. Groundwater

The Discharger shall operate and maintain a groundwater monitoring system that complies with the applicable provisions of §20415 of Title 27 in accordance with a Monitoring Program approved by the Executive Officer. The Discharger shall collect, preserve, and transport groundwater samples in accordance with the approved Sample Collection and Analysis Plan.

The Discharger shall determine the groundwater flow rate and direction in the uppermost aquifer and in any zones of perched water and in any additional zone of saturation monitored pursuant to this Monitoring and Reporting Program, and report the results semiannually, including the times of highest and lowest elevations of the water levels in the wells.

Hydrographs of each well shall be submitted showing the elevation of groundwater with respect to the elevations of the top and bottom of the screened interval and the elevation of the pump intake. Hydrographs of each well shall be prepared quarterly and submitted annually.

Groundwater samples shall be collected from the point-of-compliance wells, background wells, and any additional wells added as part of the approved groundwater monitoring system. Samples shall be collected and analyzed for the monitoring parameters in accordance with the methods and frequency specified in Table 3.

The monitoring parameters shall also be evaluated each reporting period with regards to the cation/anion balance, and the results shall be graphically presented using a Stiff diagram, a Piper graph, or a Schueller plot.

Table 3 - Groundwater Monitoring		
<u>Parameters</u>	<u>Units</u>	<u>Frequency</u>
<u>Field Parameter</u>		
Ground Water Elevation	Ft. & Hundredths, MSL	Semiannually
Temperature	°C	Semiannually
Specific Conductance	µmhos/cm	Semiannually
pH	pH number	Semiannually
Turbidity	NTU	Semiannually
<u>Monitoring Parameters</u>		
Total Dissolved Solids	mg/L	Semiannually
Chemical Oxygen Demand	mg/L	Semiannually
Chloride	mg/L	Semiannually
Sodium	mg/L	Semiannually
Nitrate – Nitrogen	mg/L	Semiannually
Total Hardness	mg/L	Semiannually
Calcium	mg/L	Semiannually

Table 3 - Groundwater Monitoring		
Magnesium	mg/L	Annually
Potassium	mg/L	Annually
Alkalinity	mg/L	Annually
Sulfate	mg/L	Annually

Table 3 parameters shall be monitored **quarterly** until a minimum of **8 samples** are collected to develop Water Quality Protection Standards (WQPS) as concentration limits in compliance with Title 27 CCR.

4. Unsaturated Zone Monitoring

The Discharger shall operate and maintain an unsaturated zone detection monitoring system that complies with the applicable provisions of §20415 of Title 27 in accordance with a monitoring plan approved by the Executive Officer. The Discharger shall collect, preserve, and transport samples in accordance with the quality assurance/quality control standards contained in the approved Sample Collection and Analysis Plan.

Unsaturated zone samples shall be collected from the monitoring devices and background monitoring devices of the approved unsaturated zone monitoring system. The collected samples shall be analyzed for the listed constituents in accordance with the methods and frequency specified in Table 4. All monitoring parameters shall be graphed so as to show historical trends at each monitoring point. If water is not present in an unsaturated zone monitoring device at the time of monitoring, the Discharger shall indicate the device as dry in the regular monitoring reports.

Unsaturated zone monitoring reports shall be included with the corresponding semiannual groundwater monitoring and shall include an evaluation of potential impacts of the facility on the unsaturated zone and compliance with the Water Quality Protection Standard.

Table 4- Unsaturated Zone Monitoring		
<u>Parameters</u>	<u>Units</u>	<u>Frequency</u>
<u>Field Parameter</u>		
Specific Conductance	µmhos/cm	Semiannually
PH	pH number	Semiannually
<u>Monitoring Parameters</u>		
Total Dissolved Solids	mg/L	Semiannually
Chemical Oxygen Demand	mg/L	Semiannually
Chloride	mg/L	Semiannually
Sodium	mg/L	Semiannually
Nitrate – Nitrogen	mg/L	Semiannually
Total hardness	mg/L	Semiannually
Calcium	mg/L	Annually

Table 4- Unsaturated Zone Monitoring		
Magnesium	mg/L	Annually
Potassium	mg/L	Annually
Alkalinity	mg/L	Annually
Sulfate	mg/L	Annually

All unsaturated zone monitoring devices shall be tested annually to demonstrate operation in conformance with waste discharge requirements. The results of these tests shall be reported to the Board and shall include comparison with earlier tests made under comparable conditions.

5. LCRS Monitoring

The LCRS sumps shall be inspected quarterly for leachate. Upon detection of leachate in a previously dry LCRS, the Discharger shall immediately collect a grab sample of the leachate and shall continue to collect grab samples of the leachate at the following frequencies thereafter. The LCRS shall be sampled and analyzed for the following:

Table 5 - LCRS Monitoring		
<u>Parameters</u>	<u>Units</u>	<u>Frequency</u>
<u>Field Parameter</u>		
Flow Rate	gallons/month	Monthly
Specific Conductance	µmhos/cm	Semiannually
pH	pH number	Semiannually
<u>Monitoring Parameters</u>		
Total Dissolved Solids	mg/L	Semiannually
Chemical Oxygen Demand	mg/L	Semiannually
Chloride	mg/L	Semiannually
Sodium	mg/L	Semiannually
Nitrate – Nitrogen	mg/L	Semiannually
Total Hardness	mg/L	Semiannually
Calcium	mg/L	Annually
Magnesium	mg/L	Annually
Potassium	mg/L	Annually
Alkalinity	mg/L	Annually
Sulfate	mg/L	Annually

All LCRSs shall be tested annually to demonstrate operation in conformance with waste discharge requirements. The results of these tests shall be reported to the Board and shall include comparison with earlier tests made under comparable conditions.

6. Surface Water Monitoring

The Discharger shall install and operate a surface water detection monitoring system where appropriate that complies with the applicable provisions of §20415 of Title 27 and has been approved by the Executive Officer.

For all monitoring points and background monitoring points assigned to surface water detection monitoring, samples shall be collected and analyzed for the monitoring parameters in accordance with the methods and frequency specified in **Table 5**. All monitoring parameters shall be graphed so as to show historical trends at each sample location.

7. Facility Monitoring

a. Facility Inspection

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility. The inspection shall assess damage to the drainage control system, groundwater monitoring equipment (including wells, etc.), and shall include the Standard Observations contained in section VIII B.h. and XII S. of Standard Provisions and Reporting Requirements. Any necessary construction, maintenance, or repairs shall be completed by **31 October**. By **15 November** of each year, the Discharger shall submit an annual report describing the results of the inspection and the repair measures implemented, including photographs of the problem and the repairs.

b. Storm Events

The Discharger shall inspect all precipitation, diversion, and drainage facilities for damage **within 7 days** following *major storm events*. Necessary repairs shall be completed **within 30 days** of the inspection. The Discharger shall report any damage and subsequent repairs within 45 days of completion of the repairs, including photographs of the problem and the repairs.

The Discharger shall implement the above monitoring program on the effective date of this Order.

Ordered by: _____
THOMAS R. PINKOS, Executive Officer

27 January 2005

Date

INFORMATION SHEET

MUSCO FAMILY OLIVE COMPANY AND THE STUDLEY COMPANY CLASS II SURFACE IMPOUNDMENTS SAN JOAQUIN COUNTY

Musco Family Olive Company and the Studley Company (Discharger) operate an olive cannery near Tracy, San Joaquin County. The Tracy facility is equipped with 1,383 storage tanks ranging in size from 11,500-gallons to 17,000-gallons and 98 processing tanks that are 2,500-gallons each. Additional olives are stored at the Discharger's Orland facilities and are trucked to Tracy for processing. The facility has approximately 45,390 tons of storage capacity and an additional 10,000 tons can be processed fresh for a total storage capacity of approximately 55,390 tons. The facility can process approximately 1,000 tons per week for a total processing capacity of 52,000 tons per year. Actual processing is expected to average approximately 35,000 tons per year.

Olives are stored in an acetic acid solution prior to processing. Processing the olives requires immersing the raw olives in lye solutions to cure the olive, then drawing the lye out of the olives with successive baths of fresh water. The olives are pitted prior to canning in a brine (sodium chloride) solution. Processing occurs year round, with fresh olives processed from September through early November and stored olives processed the remainder of the year.

The Discharger discharges an average of 28,700 gallons per day (gpd) (10,476,500 million gallons per year) of process wastewater to two Class II surface impoundments referred to as Ponds A and B waste management units (Units). The facility also incorporates a one million-gallon storage pond, 84 million-gallon storage pond, and land application areas located around the facility, including adjacent to the surface impoundments. Process wastewater destined for land application is pumped to a clay-lined 1-MG earthen holding pond and subsequently discharged to the 84-MG reservoir and the land application system for treatment and disposal. WDRs Order No. R5-2002-0148 regulates these ponds as a wastewater treatment and disposal facility. A subsurface septic treatment system occupies the acreage northwest of Ponds A and B. The system automatically distributes sanitary wastewater from septic tanks via a 3-way distribution valve to three banks of leach fields.

The three streams directed to the surface impoundments are the flotation brine (~25,000 gpd), the softener ion-exchange regeneration stream (~1,100 gpd) and the boiler blowdown (~2,600 gpd). Spent lye that can no longer be recycled and excess brine from spillage from conveyor belts is directed via floor drains and sumps to the surface impoundments on an infrequent basis. Samples from the streams were analyzed for total dissolved solids (TDS), fixed dissolved solids (FDS), sodium, chloride, calcium, magnesium, total alkalinity, phosphorus, potassium, nitrate, sulfate, boron, total and soluble biological oxygen demand (BOD), oil and grease, and pH. These wastes are classified as designated under Title 27. Background concentration limits (CLs) for groundwater as Water Quality Protection Standards (WQPSs) for constituents of concern (COCs) have not been established at this time. CLs based on intra- or interwell analysis will be

INFORMATION SHEET
MUSCO FAMILY OLIVE COMPANY AND
THE STUDLEY COMPANY
CLASS II SURFACE IMPOUNDMENTS
SAN JOAQUIN COUNTY

2

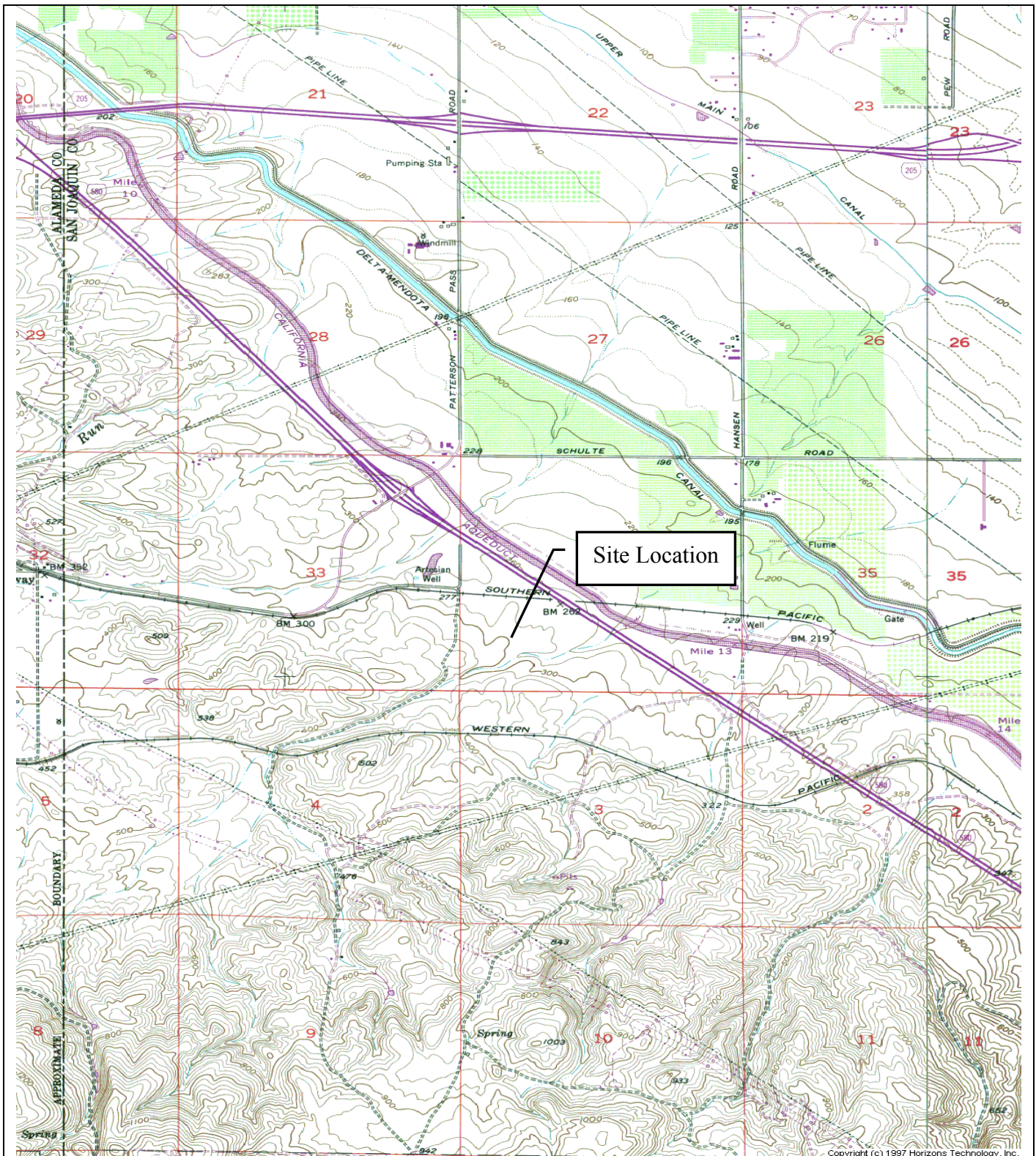
established once a sufficient number of groundwater quality results are available for statistical calculation.

The discharge poses a significant threat to water quality. Therefore, the discharge is a 'designated waste' and as such must be discharged to Class II Surface Impoundments as required by Title 27 CCR.

The designated beneficial uses of the groundwater, as specified in the Basin Plan, are domestic and municipal, agricultural, and industrial supply.

Local land use consists of industrial, residential, and agricultural operations. The site is located on an alluvial fan that generally slopes to the northeast. Topography varies from steep to nearly level. Surface drainage is toward a dry creek bed, which flows eastward toward the valley floor in the North Diablo Range Hydrologic Area (543.00) of the San Joaquin Hydrologic Basin. This creek bed does not empty into another waterway, but rather disappears on the valley floor east of the site.

KAS



Drawing Reference:
MIDWAY U.S.G.S
TOPOGRAPHIC MAP
7.5 MINUTE QUAD
Photorevised 1968

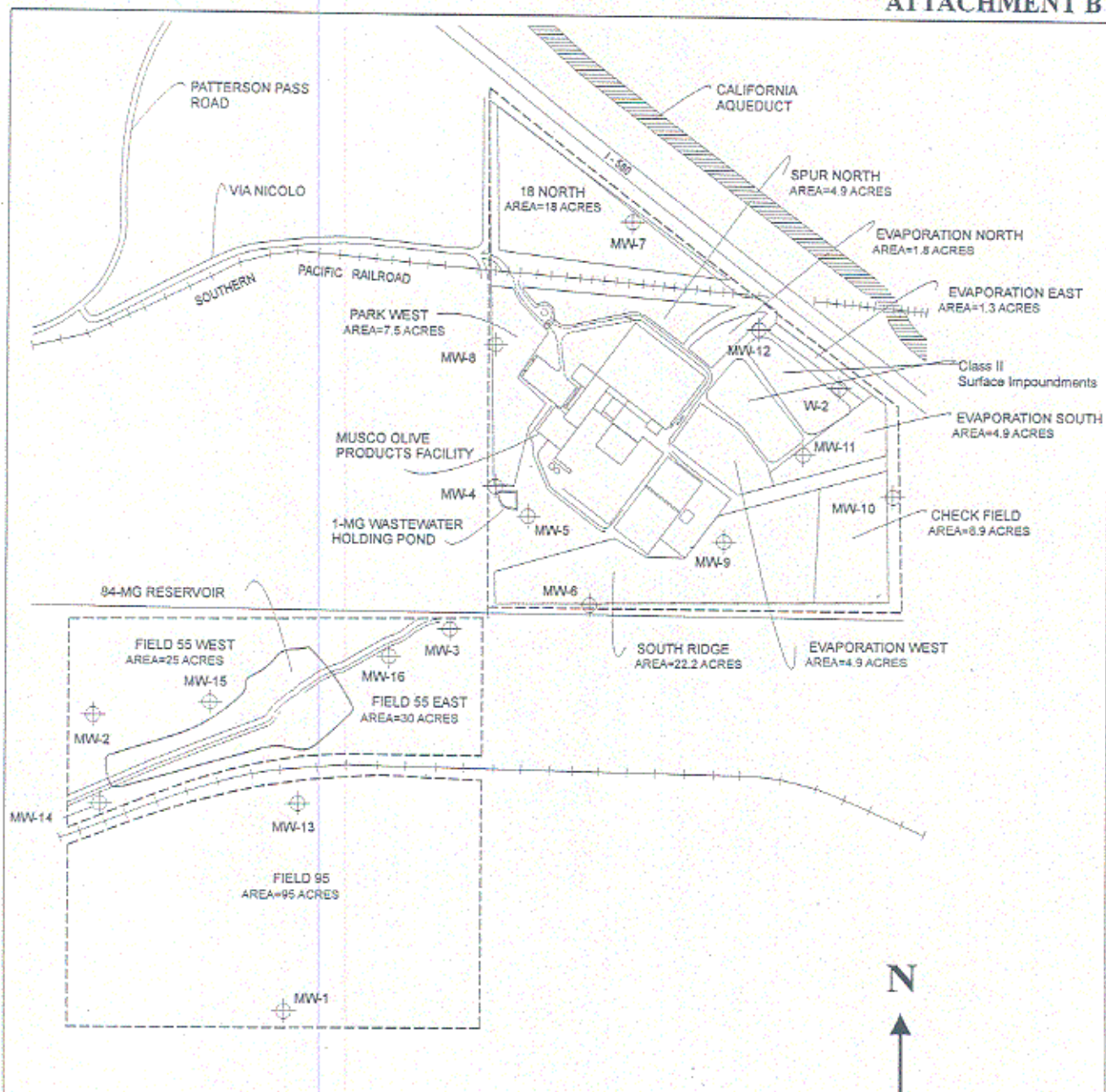
SITE LOCATION MAP

MUSCO FAMILY OLIVE COMPANY AND
THE STUDLEY COMPANY
17950 VIA NICOLO
TRACY, SAN JOAQUIN COUNTY



approx. scale
1 in. = 2540 ft.

ATTACHMENT B



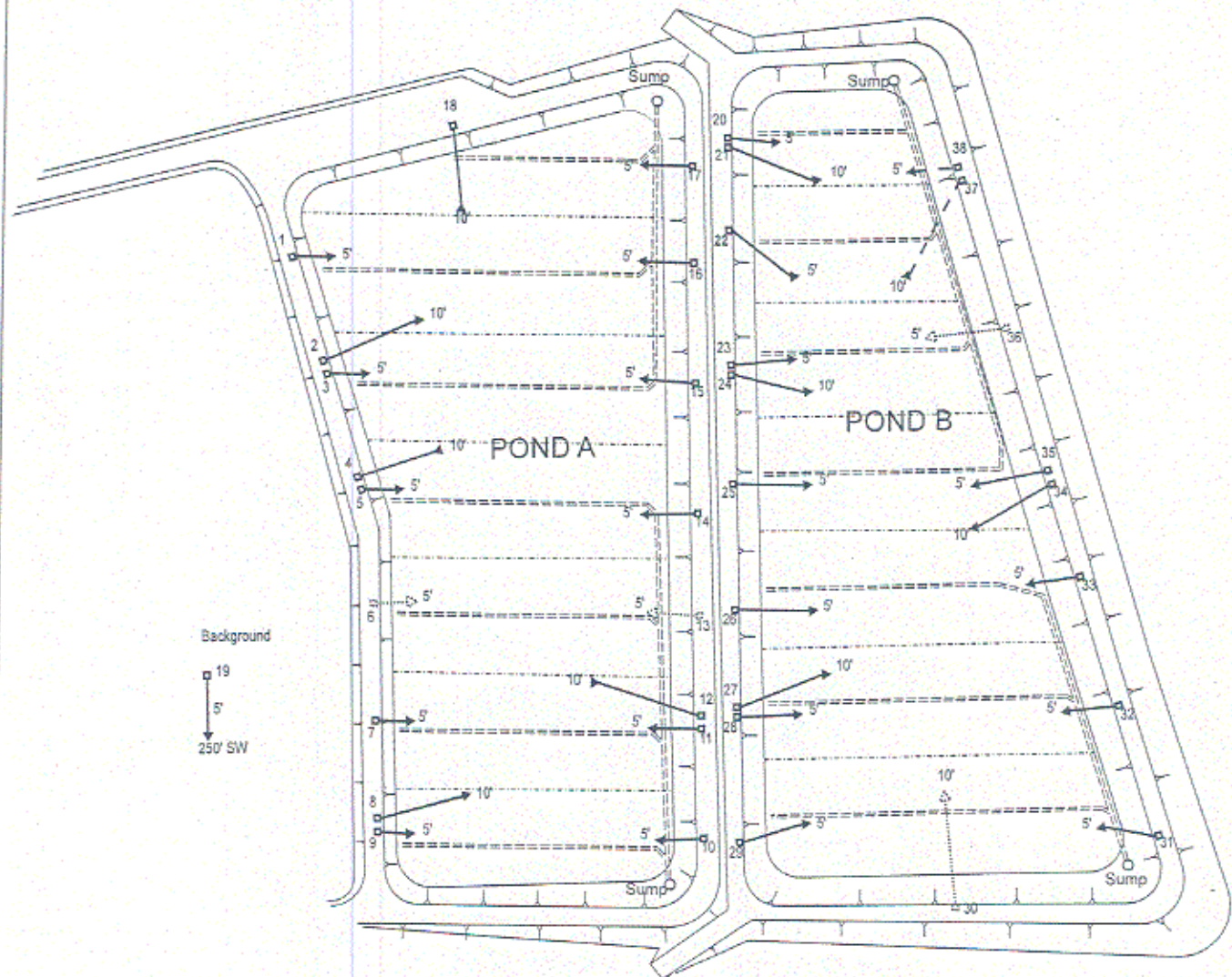
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⊕ Monitoring Well

Not to Scale

MONITORING WELL LOCATIONS

Musco Family Olive Company
Class II Surface Impoundments
San Joaquin County



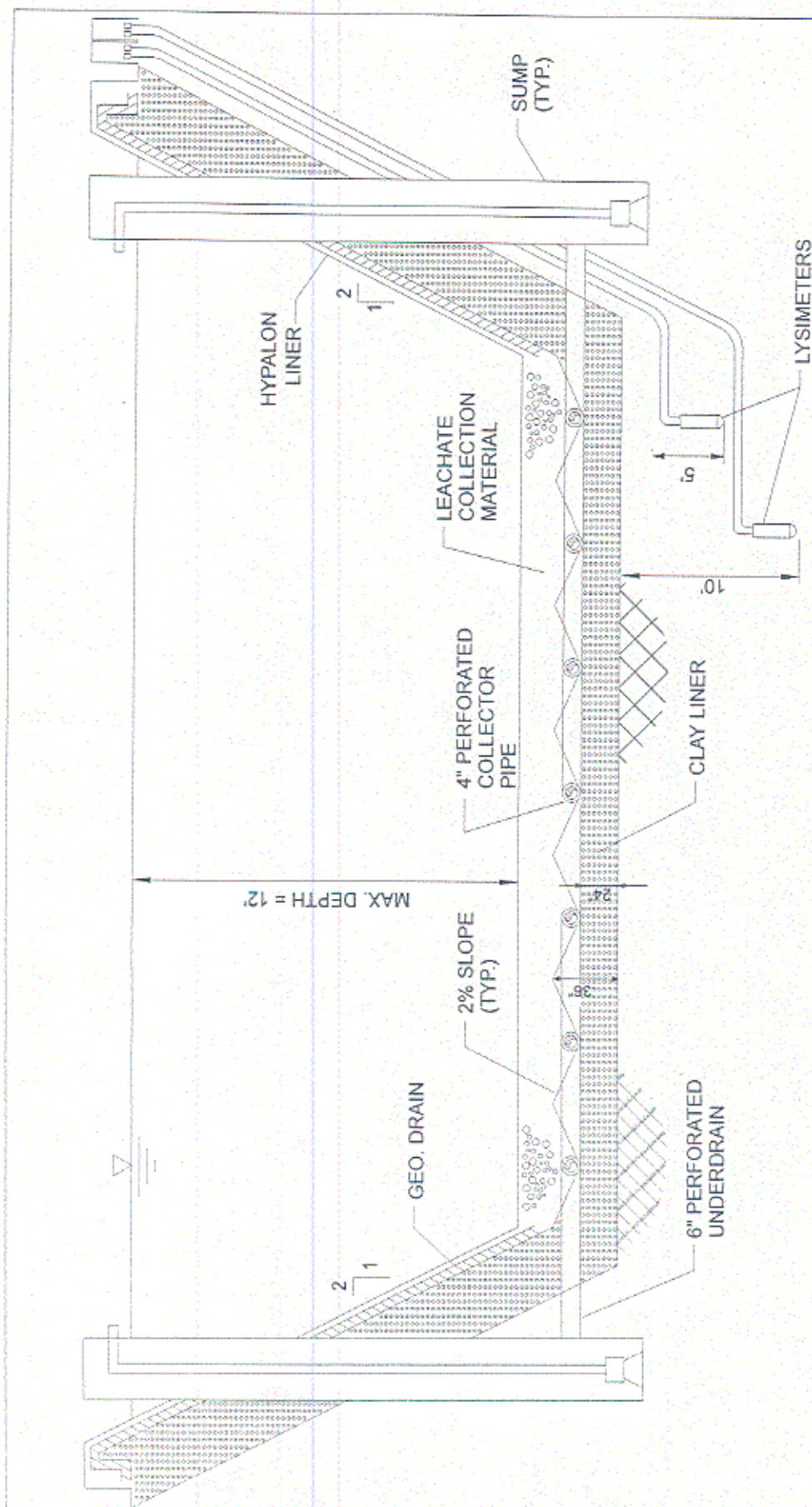
Legend

- Lysimeter (5'-10' below clay liner)
- - - - - Abandoned Lysimeter
- - - - - Damaged Lysimeter
- Sump

Not to Scale

LYSIMETER LOCATION MAP

Musco Family Olive Company
Class II Surface Impoundments
San Joaquin County



CROSS SECTION OF LINER SYSTEM

Musco Family Olive Company
Class II Surface Impoundments
San Joaquin County

Not to Scale